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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/582,495	06/27/2000	KAZUHIKO OHGA	Q59644	8756

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EXAMINER

REYES, HECTOR M

ART UNIT	PAPER NUMBER
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1623

DATE MAILED: 12/19/2001

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/582,495

Applicant(s)

OHGA ET AL.

Examiner

Hector M Reyes

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,4,6-13,15-18 and 24-34 is/are pending in the application.
- 4a) Of the above claim(s) 15 to 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 3,4, 6 to 13 and 24 to 34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

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DETAILED ACTION

Amendment Entry

Applicant's Amendment and Remarks filed on October 5, 2001 as Paper no. 8 is acknowledged. Previous Office Action was based upon the elected group: original claims 1 to 14 and 19-20 drawn to a process to produce an ester and a group of esters produced by such process. The election filed on June 4, 2001 as Paper no. 6 was made without traverse as indicated and acknowledged in the previous office Action.

Status of the Claims

Claims 1, 2, 5, 14, 19 and 20 have been canceled. Claims 3, 6, 7, 8, 9 and 13 have been amended. New claims 30, 31, 32, 33 and 34 have been added. Currently, claims 3, 4, 6-13, 15-18 and 24-34 are under examination.

Regarding the previous office action, canceled claims 19 and 20 were not allowed, if not that as indicated in page 5, "claims 19 and 20 would be allowed if rewritten to overcome all the limitations of the base claim and other intervening claims", and therefore such claims were not allowed and should be objected, however, both claims have been canceled, by the Amendment and therefore such claims are not further under consideration.

Claims 15 to 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

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Rejections Withdrawn

Rejection of claims 1, 2, 5, 6-13 under 35 USC 102 (b) as being anticipated by Tanaka et al is withdraw in view of Applicant's amendment and remarks. Rejection of claims 1 to 4 under 35 USC 102 (b), as being anticipated by Jiang et al is withdrawn in view of Applicant's amendment and remarks.

New Claims Rejections

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 3, 4, 6, 7, 8, 9, 11, 12, 13, 24, 25, 26, 27, 28, 29, 32, and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. All such claims are dependent claims, making reference to a process already claim in an independent claim. However, all such claims start with the article "A process" and is not clear if such claims are directed to a new process or on the contrary they only presents further limitations to the process outline in the independent claims from which each one of them depend.

Claims 24, 25, 26 and 27 are rejected because such claims are dependent claims of claims 19 and 20, which have been canceled.

Claims 10, 30, 31 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 10:

- OK
- the phrase "as to produce a hydrogenated ester corresponding to the allyl-type ester" is not clear because while the process is directed to the reduction of the double bond in the starting material the product is described as unsaturated or in terms of the same starting material. If a hydrogenation took place through the claimed process, then the product is no longer an "allyl-type ester" because there is no allyl group present in the product.

In claim 30,

- OK
- the phrase "to produce a hydrogenated ester corresponding to the unsaturated group-containing ester" is confusing because simultaneously describes the product obtained as unsaturated and saturated. What is the real product obtained?
 - in the description of the general formula (1) any of the groups R1 to R5 can be "an arbitrary alkenyl group containing 1 to 10 carbon atoms" however, it is unknown in the art the possibility of an "alkenyl group" having only one carbon atom and
 - OK in the description of the general formula (1) any of the groups R1 to R5 can be "an arbitrary alkenyl group containing 1 to 10 carbon atoms" and the obtained product is described as "a hydrogenated ester". It is not clear if the alkenyl group present as any of the substituents R1 to R5 is also reduced during the hydrogenation process or if only the alkenyl group reduced or hydrogenated is the one next to or in an allyl position to the ester functional group.

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- the phrase "reacting the unsaturated group containing ester by diluting said unsaturated group-containing ester with an inert solvent to effectuate a hydrogenation reaction" is not clear. It is understood from such phrase that the only step in the claimed process is a "dilution of the substrate with an inert solvent" in order to "effectuate a hydrogenation reaction". Is a dilution of the substrate the only requirement needed in order for the claimed process to take place?

In claim 33:

- the phrase "wherein at least one species" is confusing since a singular and plural terms are being used in a confusing manner. Is "wherein at least one of the species" the intended phrase?
- the expression "an arbitrary alkenyl group containing 1 to 10 carbons atoms" used to described the structure of the starting material is confusing, since at least two carbons are needed in order to have such organic functional group; such similar expression is used in the description of the product
- the phrase "producing a hydrogenated ester," describes the product as one wherein the alkene group has been hydrogenated. However such product can have and alkenyl functional group and therefore not be a "hydrogenated ester" as previously described. Is the product hydrogenated or unsaturated? What are the functional groups affected by the claimed process? What is the product obtained in the claimed process?

In claims 31 and 33:

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the presence of the groups R7 to R11 in the formula (2), which is directed to described the product is confusing since the groups R1 to R5 are not present in the product but the claimed process is not directed to alternate or transform such groups because is a hydrogenation reaction, which is suppose to only add hydrogen and not to affect other groups.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 32 recites the broad recitation "hydrogenating catalyst selected from at least one metal selected from the group consisting of Group VIII, Group IX and Group X elements in the periodic table", and the claim also recites "is at least one species selected from the group consisting of palladium, ruthenium, and rhodium" which is the narrower statement of the range/limitation.

Priority

Priority documents regarding foreign priority are not found in the record of the case.

New Rejections

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 30, 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Russell et al, *Journal of Organic Chemistry*, vol. 36, no. 14, 1971

Russell discloses a process directed to a facile reduction of unsaturated compounds having oxygen. Russell's process comprises a reaction mixture having:

- 100 mmol substrate to be hydrogenated as Allyl acetate
- 50 ml of 95 % ethyl alcohol containing
- 50 mg of the prepared catalyst comprising Nickel
- (Experimental Section, Hydrogenation Procedure).

Claims 30, 6, 7 and 8 are rejected under 35 U.S.C 102 (b) as being anticipated by Xiangkai et al, *Cuiha Xuebao* (1996), 17, 3, 260-262.

Xiangkai discloses a method to hydrogenate unsaturated compounds, among them vinyl acetate. Such hydrogenation of vinyl acetate comprises:

- 5 mmol of substrate as vinyl acetate in order to obtain ethyl acetate

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- 17 ml of methanol as a solvent
 - 0.1 g of a catalyst comprising Pd,
 - heating reaction mixture at 40 °C (see page 261 Table 2 and Reaction conditions at the bottom of such Table 2).


CONCLUSION

Any inquiry concerning this communication should be directed to Hector M. Reyes whose telephone number is (703) 605-1153. The examiner can normally be reached on M to F 9am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Geist can be reached on (703) 308-1701. The fax number for the organization where this application or proceeding is assigned is (703) 308-4556 or for regular communication and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of the application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.


12/17/01


GARY GEIST
SUPERVISORY PATENT EXAMINER
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